

ABSTRACT OF THE DISCLOSURE

An addition and subtraction circuit performs addition and subtraction using a carry-in signal from another operation circuit, and outputs a carry-out signal generated through addition and subtraction to another operation circuit. A right-shift circuit performs right-shift using a shift-in signal from another operation circuit, and outputs a shift-out signal generated through right-shift to another operation circuit. Therefore, even if a data length of operation data is extended, a propagation path for a carry can be shortened, and an operation clock frequency of an encryption circuit can be increased.